

**Amendments to the Specification:**

On page 5, please replace the first paragraph on lines 1-9 with the following amended paragraph:

Figure 2 is a block diagram of a settop terminal 17 with the a universal modulator 19 shown coupled to the output outputs 23, 25, 27 of a demodulator/decoder 21. The demodulator/decoder 21 ~~outputs~~ supplies a customer's channel selection to the universal modulator 19 as a baseband audio signal via the output 23 and as a baseband video signal via the output 25. The ~~functional description of the demodulator/decoder 21 is beyond the scope of the present invention 19 and shall not be described.~~ An alternate (second) audio source signal 27, such as a NICAM carrier or modulated audio signal which differs from the baseband audio signal, may also be supplied ~~and to the universal modulator 19~~ via the output 27 of the demodulator/decoder 21 29. A reference clock signal 37 originating from a master oscillator (not shown) and a common communication bus 39 are also coupled to the universal modulator 19. The functional description of the demodulator/decoder 21 is beyond the scope of the present invention and shall not be described in further detail.

On page 5, please replace the second paragraph on lines 10-16 with the following amended paragraph:

The higher quality baseband audio **23** and video **25** signals provided by outputs **23** and **25** of the demodulator/decoder **21** are made available as settop terminal outputs **31**, **33**, respectively, and may be coupled to television receivers that have baseband inputs. The alternate audio signal provided by output **27** may be made available as settop terminal output **29**. For television receivers that lack these features ~~this feature~~, the universal modulator **19** provides an up-conversion output **35** compatible with the television broadcast standard used, from baseband to VHF or UHF for coupling to an antenna input.

On page 5, please delete the third paragraph on lines 17-21.

On page 6, please replace the paragraph on lines 9-27 with the following amended paragraph:

The communication bus protocol permits configuring component parameters to a particular broadcast standard using a unique addressing system within the settop terminal **17**. As shown in **Figure 3**, the I<sup>2</sup>C bus **39** communicates with: a

~~baseband audio~~ an addressable programmable PLL frequency synthesizer **41** for a  
baseband audio mixer 69, a solid state switch ~~second audio carrier switched input~~  
**43**, adjustable amplifiers for the baseband video input **45** and baseband audio input  
**47**, a an addressable programmable PLL frequency synthesizer **49** for an up-  
conversion ~~up-converter~~ mixer **91** and a an addressable programmable PLL  
frequency synthesizer **51** for a down-conversion ~~down-converter~~ mixer **101**.  
Although ~~third~~ the addressable programmable PLL frequency synthesizer 51 has  
been described as being coupled to a ~~"down-converter"~~ "down-conversion" mixer **101**,  
the ~~down-converter~~ down-conversion mixer **101** may in fact further up-convert ~~the a~~  
HI-IF signal **93** to a higher frequency signal. It should be noted that each PLL  
frequency synthesizer **41**, **49**, **51** has an associated oscillator driver **L01**, **L02**, **L03**  
respectively (not shown). Each respective component has its own address to permit  
firmware contained parameters to be loaded for a given broadcast standard  
configuration.

On page 7, please replace the paragraph on lines 1-23 with the following amended  
paragraph:

An ~~The~~ alternate (second) audio carrier input 53, ~~modulated provided by the~~  
output 27 of the demodulator/decoder 21, is coupled to the solid state switch **43**.

The output of the switch **43** is coupled to a first input **55** of a summing amplifier **57**. The baseband video input **59** is coupled to a clamp **61** which limits signal amplitude. The output from the clamp **61** is coupled to the video adjustable amplifier **45** where signal gain is increased or attenuated depending upon the broadcast standard. The output from the adjustable amplifier **45** is coupled to a hard limiter **63** which clips signal peaks. The output from the limiter **63** is coupled to a second input **65** of the summing amplifier **57**. The baseband audio input **67** is coupled to a baseband audio mixer **69** via an adjustable amplifier **68**. The baseband audio mixer **69** modulates the baseband to the broadcast standard. The baseband audio mixer **69** may be selectively activated or deactivated by the I<sup>2</sup>C bus as required to support the standard in use. The output from the baseband audio mixer **69** is coupled to a lowpass filter **71** to remove RF. A second input to the audio lowpass filter **71** is provided as a modulated audio input **72**. The audio lowpass filter **71** is coupled to an audio adjustable amplifier **47** where signal gain is increased or attenuated. The audio adjustable amplifier **47** output is coupled to a third input **73** of the summing amplifier **57**.

On pages 9, please replace the paragraph on lines 5-12 with the following amended paragraph:

Referring back to **Figure 3**, the summer amplifier **57** output is modulated with the frequency output from the second programmable PLL **49** to drive the up-conversion mixer ~~modulator~~ **91** and translate the summed output to a high intermediate frequency (HI-IF) **93**. The HI-IF **93** is higher than the highest expected frequency in the summed amplifier **57** output bandwidth. In the present invention **19**, the input to the ~~up-converter~~ up-conversion mixer **91** is not bandwidth limited.

On pages 9-10, please replace the paragraph beginning on line 13 of page 9 and ending on page 10, line 7 with the following amended paragraph:

The summing amplifier **57** output frequencies are translated to a new bandwidth, starting at a low frequency of the second PLL **49** minus the highest input band frequency, and ending at a high frequency of the third PLL **51** minus the lowest input band frequency. The second PLL **49** frequency is selected to translate the summing amplifier **57** output to correspond to the passband of an intermediate lowpass filter **95**. The output from the lowpass filter **95** is coupled to a buffer amplifier **97** to restore gain losses. The output from the buffer amplifier **97** is input to a final lowpass filter **99**. The buffer amplifier **97** maintains the system noise figure by overcoming the losses in the up-conversion mixer **91** and first HI-IF filter

**95.** The signal is filtered by a ~~HI-FI~~ HI-IF filter **99**, with the output coupled to a down-conversion mixer **101**. The third PLL synthesizer **51** is coupled to the down-conversion mixer **101**. The difference between the HI-IF **93** and the third PLL **51** frequency is the desired output channel in the IF band. It should, however, be noted that the down-conversion ~~down-converter~~ mixer **101** may accept the HI-IF **93** and further up-convert the signal to a higher frequency RF signal. The output is then filtered via a low pass filter **103**, (or other appropriate filter if up-converted), and forwarded as an RF output frequency **105** for reception by a television receiver.

Please replace the Abstract with the following: